



March 6, 2014

**Letter – Expression of Interest
VIA ECFS**

Chairman Thomas Wheeler
Commissioner Mignon Clyburn
Commissioner Jessica Rosenworcel
Commissioner Ajit Pai
Commissioner Michael O’Rielly
Jonathan Chambers
Federal Communications Commission
445 12th Street, SW 20024
Washington, DC

**Re: Expression of Interest – Rural Broadband Experiments
Connect America Fund, WC Docket No. 10-90**

Dear Chairman Wheeler, Commissioners, and Mr. Chambers,

This letter is to express Waterford WISP’s interest in receiving funding from the Rural Broadband Experiments announced at the January 30th FCC Open Meeting.

Background

Waterford WISP, Incorporated was founded in 2003 as an affiliate of the non-profit Waterford Foundation to provide high speed wireless Internet access service to homes in the Waterford community and surrounding countryside of Loudoun County, Virginia. Waterford WISP is one of the oldest, if not the oldest continuously operating commercial wireless broadband operators in Loudoun County and Northern Virginia. It was founded by Waterford residents and community leaders who understood the value of bringing high-speed Internet broadband service to residents.

Today, in 2014, our residents and businesses are being financially harmed by the lack of modern, high speed broadband services capable of providing the range of services enjoyed across the digital divide. Real estate agents report one of the first questions they answer from

prospective buyers is “What broadband service is available here?”

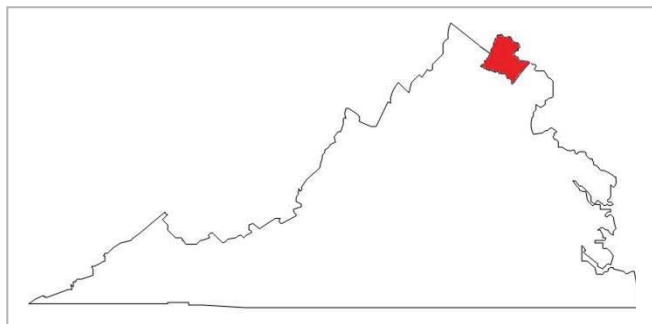


Figure 1- Loudoun County, Virginia

In my own home, I face the 2014 version of the 1950’s question “how do we keep the kids on the farm?” The farms have been replaced by subdivisions but the legacy copper



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telephone networks remain unchanged. As our sons and daughters return from college where they experience the latest in high-speed networks and streamed-everything, they are frustrated and bored with dial-up or low speed wireless internet services. These kids, who don't have fixed landline telephone service, are reliant upon the availability of 21st century technologies. It is imperative the FCC use RUS and CAF funding to fund experiments to deploy broadband networks to rural communities. The traditional carriers have failed us, it's time for a new choice.

To further our goals to expand capabilities and coverage area to an expanded area under this federal program, Waterford WISP has enlisted support from an assortment of wireless service providers, a tower construction firm, a fiber OSP engineering and construction firm, and Loudoun County broadband initiative leaders. These entities form the partners and consultants who'll assist or join Waterford WISP to build and operate the new expanded network.

Geographic Territory

Waterford WISP's plan is to provide high-speed (5 – 100 Mbps) service to unserved rural areas of the Catoctin and Shenandoah Valleys in western Loudoun County, VA, southern Jefferson County, WV, southern Washington and Frederick Counties, MD, described by the TractIDs listed in the table below.

State	County	County Name	TractID	Eligible High Cost Locations	Extremely High Cost Locations	Annual Support
VA	51107	Loudoun	51107610101	234	4	\$38,242.37
VA	51107	Loudoun	51107610102	124	2	\$27,404.45
VA	51107	Loudoun	51107610201	235	4	\$47,945.90
VA	51107	Loudoun	51107610202	249	3	\$48,529.89
VA	51107	Loudoun	51107610300	224	0	\$130,487.13
VA	51107	Loudoun	51107610701	12	0	\$2,821.62
VA	51107	Loudoun	51107610702	4	0	\$1,377.85
VA	51107	Loudoun	51107610703	88	0	\$48,618.84
VA	51107	Loudoun	51107610800	1096	13	\$334,683.73
VA	51107	Loudoun	51107610900	133	0	\$113,052.13
VA	51107	Loudoun	51107611024	10	0	\$41,542.35
VA	51107	Loudoun	51107611025	2	0	\$7,080.03
VA	51107	Loudoun	51107611801	4	0	\$5,019.25
VA	51107	Loudoun	51107611804	1	0	\$1,554.47
VA	51107	Loudoun	51107611806	31	0	\$37,911.12
VA	51107	Loudoun	51107980100	1	1	\$746.85
MD	24021	Frederick	24021752201	129	2	\$34,854.11
MD	24021	Frederick	24021752302	37	3	\$42,445.17
MD	24021	Frederick	24021752303	28	1	\$20,114.39



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MD	24021	Frederick	24021752501	51	0	\$15,267.63
MD	24021	Frederick	24021752502	39	1	\$8,627.75
MD	24021	Frederick	24021770700	30	0	\$10,316.02
MD	24021	Frederick	24021775302	19	3	\$3,767.13
MD	24043	Washington	24043010900	48	0	\$18,298.87
MD	24043	Washington	24043011400	10	0	\$2,369.72
MD	24043	Washington	24043011500	93	0	\$25,325.18
MD	24043	Washington	24043011600	18	1	\$4,839.69
WV	54037	Jefferson	54037972506	57	0	\$4,038.46
WV	54037	Jefferson	54037972601	1	0	\$22,388.24
WV	54037	Jefferson	54037972602	16	0	\$11,345.32
WV	54037	Jefferson	54037972701	6	0	\$3,086.84
WV	54037	Jefferson	54037972702	3	0	\$394.10
WV	54037	Jefferson	54037972800	77	4	\$33,594.42

Waterford WISP is investigating the process for designation as an Eligible Telecommunication Carrier (ETC) designation with the FCC or the Virginia State Corporation Commission (VA SCC). If Waterford WISP is awarded funding we commit to making the necessary regulatory filings and believe that we would meet the requirements set forth by the VA SCC or the FCC.

List of Anchor Institutions

Schools: Waterford Elementary, Lovettsville Elementary, Woodgrove High School, Loudoun Valley High School, Harmony Middle School, Blue Ridge Elementary, Foxcroft School, The Hill School

Libraries: Lovettsville Public Library, Purcellville Public Library, Middleburg Public Library

Healthcare: INOVA Urgent Care, Purcellville

City offices: Lovettsville, Purcellville, Middleburg

Community Centers: Waterford Foundation Community Center and Auditorium, Waterford Foundation Corner Store, Waterford Old Mill, Loudoun County Community Centers in Lovettsville, Bluemont, Philomont, Purcellville

Proposed technology

Consistent with the adequacy of support funds made available in this experiment, one of the following service architectures will be chosen:

- Fiber optic (FTTH) based IP services supporting Voice, Video, and Broadband services tiered from 5-100 Mbps.
- Unlicensed wireless broadband services with tiered speeds beginning at 5 Mbps downstream/2Mbps upstream.
- Some combination of the above.

State and/or Local or Tribal Government Participation in and/or Support for Project



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Waterford WISP has participated in Loudoun County Chamber of Commerce's periodic Broadband Planning seminars, Loudoun County Communications Commission meetings, and Loudoun County Board of Supervisors meetings on broadband initiatives. Waterford WISP has asked the County to use its own aggregate telecommunications expenditures to promote competition and growth of alternative providers, rather than relying exclusively on franchise or regulated carriers. Simply making their future revenue opportunities open to new providers may spur creation or growth of new companies seeking critical mass to serve rural areas. See attached resolution by the Loudoun County Board of Supervisors.

Existing Providers

In a very limited portion of the proposed areas there is Verizon DSL service available, but the coverage and speeds offered to customers is variable, dependent upon the location. COMCAST has declined to serve the majority of western Loudoun County. Waterford WISP and other wireless Internet service providers exist in the area but are stymied by incumbent carriers who refuse to provide access to low cost bandwidth or backhaul services. The prevalent 1-2 Mbps wireless Internet service does not meet the threshold of this program.

Project Timeline

Waterford WISP anticipates a three year, four phase approach beginning with the central Catocin Valley communities in the northwestern part of Loudoun County (tractids 51107610300, 51107610101, 51107610102, 51107610201, 51107610202). Phase two would be the southwestern part of Loudoun County (tractids 51107610703, 51107610800, 51107610900). Phase three would include the TRACTIDs identified in southern Jefferson County, WV, southern Washington and Frederick Counties, MD. Phase four would be to build towers for broadband wireless services to fill-in or extend coverage to areas not economically covered by fiber or to support public service wireless service for fire and emergency responders.

The project would be phased this way because of current fiber backbone availability, need to secure land or rights of way, build towers or to lease tower space, to trench or hand/over-lash fiber, and to deploy service within each phase.

Scalability

Waterford WISP proposes to use the most advanced IP transport technologies that support voice, data, Internet, video, and growing streaming content demands. Single mode fiber deployments offer "build once, update many times" scalability as multiplexing improvements continue to scale in capability and transmission speeds.

Investment Needed

The 2007 Fiber Broadband Study conducted by Loudoun County estimated the investment needed to complete a FTTH build of 1,256 miles to serve 44, 515 homes, businesses, and community sites in western Loudoun County at \$210 Million.

We are working to develop an update this estimate and to identify the cost to serve the adjoining census tracts identified in Maryland and West Virginia.

Leveraging Funds



Waterford WISP

An exemplary example of a public-private partnership working to bring advanced Internet and broadband services to isolated rural and mountainous communities that Waterford WISP's principals have studied for more than ten years lies just 67 miles to our northwest in Maryland. In 1996, four organizations: Allegany County, MD, Allegany County Public Schools, Allegany County Library System, and the City of Cumberland, MD, pooled grant monies and donated resources totaling \$4.3 million to form the ALLCONET, or Allegany County Network, partnership. Currently, that partnership provides Internet and Intranet connectivity and related services to over 40 government entities and non-profit organizations.

ALLCONET (www.allconet.org) created an open-access, carrier's carrier wireless network providing non-discriminatory access to transport, towers, and wireless services to partners and members. This vision is shared by Waterford WISP in its plan to embrace all providers and partners who can expand the breadth and quality of service and content made available to rural areas, businesses, residents, and emergency responders.

Thank you for considering Waterford WISP's Expression of Interest in your planning for the amount of funding that will be allocated in the Rural Broadband Experiments. We commend the FCC in this effort to connect rural communities and are ready to help you close the digital divide.

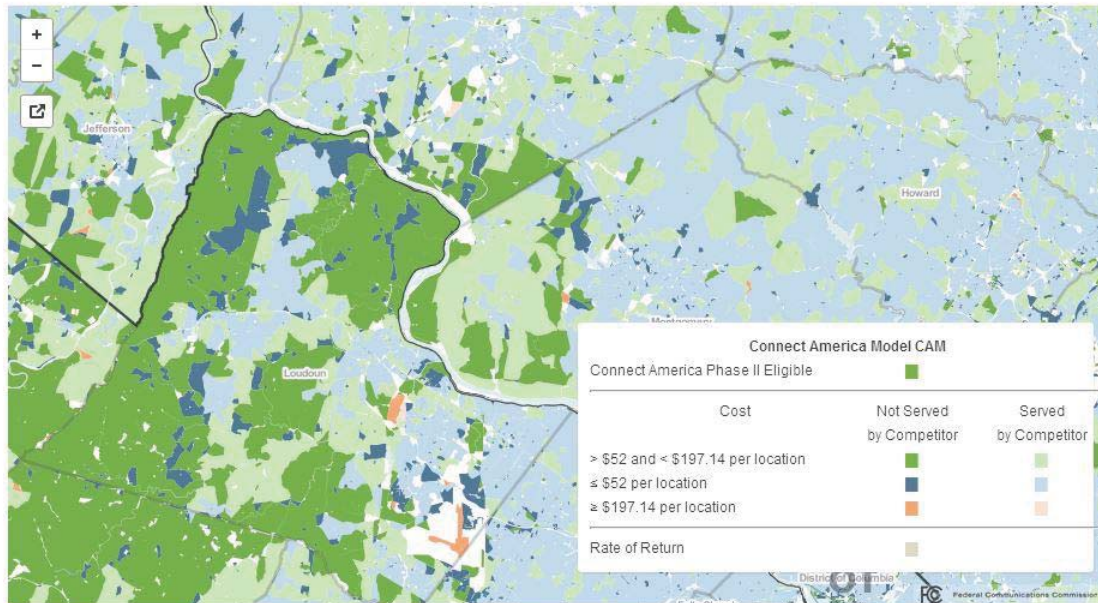
Sincerely,

James A. Sutton
President
Waterford WISP, Inc.

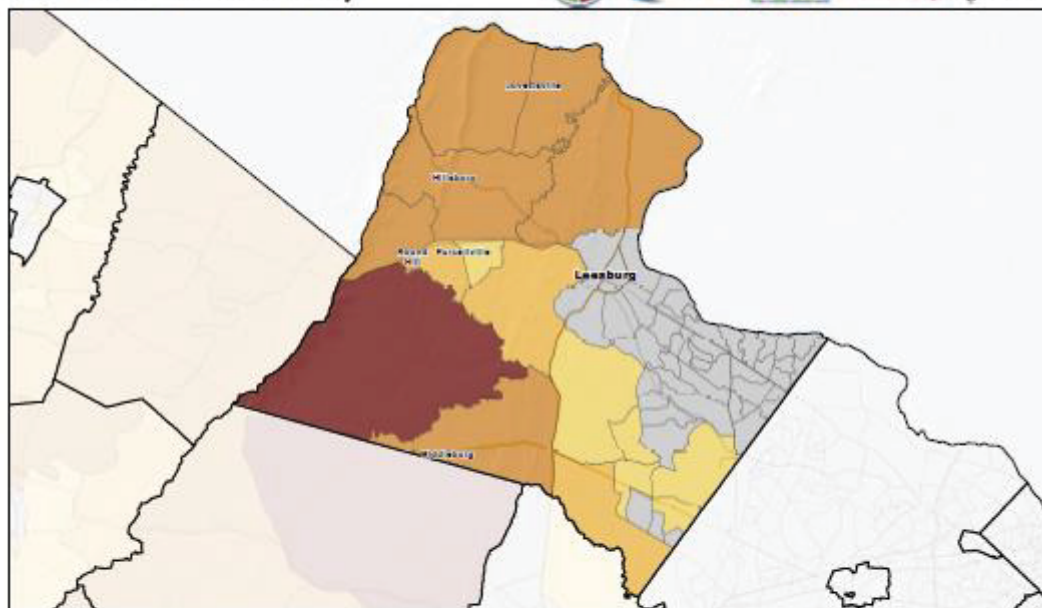


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FCC - Connect America Fund Phase II – CAM v4.0 Illustrative Map with Funding Threshold of \$52



Loudoun County



Census Tracts Number of Eligible High Cost Locations

0 HC Locations - Not Eligible
1 - 10 HC Locations
10 - 100 HC Locations
100 - 500 HC Locations
500 - 1000 HC Locations
1000 - 1600 HC Locations

Total Population of Loudoun County as of 2010: 312,311



VA State Broadband Website: <http://gismaps.virginia.gov/broadband>
VA Vertical Assets Website: <http://www.cgt.vt.edu/verticalassets>



*Data may not be complete or comprehensive